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cDNA: 1 - 8117 [SEQ ID NO:1]
CDS: 170 - 7876 [SEQ ID NO:2]
AA: [SEQ ID NO:3]

cacccggggagacgtcttagacagtcgtggttcctgtgatctgtgtcctctt	52
tgcagaagttctgtgtccatctcatgtgctgctgtgtctgttaaagcctcat	104
tccgtgctgtctggcaggaagctccatctcatctcatctcacggccctg	156
gcactgcctcagc	196
M A I S S R L A L	9
ATG GCC ATC TCA TCA CGC CTC GCC CTG	196
W E Q K I R E E D K S P P	22
TGG GAG CAG AAG ATT CGG GAA GAG GAC AAG AGC CCT CCA	235
P S S P P P L F S V I P G	35
CCA TCC TCG CCC CCT CCT CTT TTC TCT GTC ATC CCA GGG	274
G F I K Q L V R G T E K E	48
GGC TTC ATT AAG CAA CTG GTC CGG GGG ACT GAA AAA GAG	313
A K E A R Q R K Q L A V A	61
GCC AAG GAA GCG AGA CAG AGG AAG CAG TTA GCT GTC GCC	352
S P E R E I P E I S I S Q	74
TCT CCA GAA CGA GAG ATC CCA GAA ATT TCC ATC AGC CAA	391
P N S K S S S G T R S G S	87
CCC AAC AGC AAG TCC AGC AGT GGC ACC AGA TCT GGA AGC	430
Q Q I S Q D D Q S S S P G	100
CAG CAG ATC TCT CAG GAC GAC CAG TCA AGC TCT CCT GGG	469
S S D I L G K E S E G S R	113
AGC TCA GAC ATT CTG GGC AAG GAG AGC GAG GGG TCC CGC	508
S P D P E Q M T S I N G E	126
AGC CCC GAC CCT GAG CAG ATG ACA AGC ATC AAT GGT GAG	547
K A Q E L G S S A T P T K	139
AAG GCC CAG GAG CTG GGC TCC AGT GCG ACA CCA ACC AAA	586
K T V P F K R G V R R G D	152
AAG ACT GTC CCC TTC AAG AGG GGC GTG AGG AGG GGT GAT	625
V L L M V A K L D P D S A	165
GTG TTG TTG ATG GTG GCC AAG CTG GAC CCG GAC TCA GCC	664
K P E K T H P H D A P P C	178

FIG. 2A

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AAG	CCA	GAG	AAG	ACT	CAT	CCC	CAT	GAC	GCC	CCC	CCT	TGC	703
K	T	S	P	P	A	T	D	T	G	K	E	K	191
AAG	ACC	TCT	CCC	CCC	GCC	ACA	GAT	ACT	GGA	AAG	GAA	AAG	742
K	G	E	T	S	R	T	P	C	G	S	Q	A	204
AAA	GGG	GAG	ACC	TCT	AGG	ACT	CCT	TGT	GGC	TCC	CAG	GCC	781
S	T	E	I	L	A	P	K	A	E	K	T	R	217
AGC	ACC	GAG	ATC	TTG	GCC	CCG	AAA	GCT	GAG	AAG	ACC	CGG	820
T	G	G	L	G	D	P	G	Q	G	T	V	A	230
ACT	GGG	GGT	CTT	GGG	GAC	CCA	GGC	CAA	GGA	ACT	GTG	GCA	859
L	K	K	G	E	E	G	Q	S	I	V	G	K	243
CTG	AAA	AAA	GGC	GAG	GAG	GGT	CAA	AGC	ATA	GTG	GGG	AAG	898
G	L	G	T	P	K	T	T	E	L	K	E	A	256
GGG	CTT	GGG	ACC	CCC	AAG	ACC	ACA	GAG	CTG	AAA	GAG	GCT	937
E	P	Q	G	K	D	R	Q	G	T	R	P	Q	269
GAG	CCC	CAG	GGC	AAA	GAC	AGG	CAG	GGG	ACC	AGG	CCC	CAA	976
A	Q	G	P	G	E	G	V	R	P	G	K	A	282
GCC	CAA	GGG	CCC	GGC	GAG	GGG	GTG	CGA	CCA	GGG	AAA	GCA	1015
E	K	E	G	A	E	P	T	N	T	V	E	K	295
GAG	AAG	GAG	GGA	GCA	GAG	CCC	ACA	AAC	ACG	GTG	GAA	AAG	1054
G	N	V	S	K	D	V	G	S	E	G	K	H	308
GGG	AAT	GTC	TCT	AAG	GAC	GTA	GGG	AGT	GAA	GGG	AAG	CAC	1093
V	R	P	Q	I	P	G	R	K	W	G	G	F	321
GTA	AGG	CCC	CAA	ATC	CCT	GGG	AGA	AAG	TGG	GGA	GGT	TTC	1132
L	G	R	R	S	K	W	D	G	P	Q	N	K	334
CTG	GGA	AGA	AGG	AGT	AAG	TGG	GAC	GGT	CCC	CAG	AAT	AAG	1171
K	D	K	E	G	V	L	L	S	K	A	E	K	347
AAG	GAC	AAA	GAA	GGG	GTG	CTC	TTA	AGT	AAG	GCA	GAG	AAG	1210
T	G	E	P	Q	T	Q	M	E	K	T	S	Q	360
ACA	GGT	GAG	CCT	CAG	ACC	CAG	ATG	GAG	AAG	ACA	AGC	CAA	1249
V	Q	G	E	L	G	D	D	L	R	M	G	E	373
GTG	CAG	GGC	GAG	TTG	GGG	GAC	GAT	CTG	AGA	ATG	GGG	GAG	1288
K	A	G	E	L	R	S	T	T	G	K	A	G	386
AAA	GCA	GGT	GAG	CTT	CGG	AGC	ACG	ACT	GGG	AAG	GCA	GGT	1327
E	S	W	D	K	K	E	K	M	G	Q	P	Q	399
GAG	TCC	TGG	GAT	AAG	AAG	GAA	AAG	ATG	GGG	CAA	CCC	CAG	1366

FIG. 2B

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G	K	S	G	N	A	G	E	A	R	S	Q	T	412
GGT	AAG	TCC	GGG	AAC	GCA	GGT	GAA	GCT	CGG	AGT	CAG	ACA	1405
E	K	G	C	E	A	P	K	E	V	S	T	M	425
GAG	AAG	GGC	TGT	GAA	GCC	CCA	AAG	GAG	GTG	AGC	ACA	ATG	1444
V	E	S	P	A	A	P	G	K	G	G	W	P	438
GTG	GAG	TCG	CCA	GCA	GCT	CCT	GGG	AAG	GGA	GGC	TGG	CCA	1483
G	S	R	G	Q	E	A	E	E	P	C	S	R	451
GGA	AGC	CGT	GGG	CAG	GAA	GCA	GAG	GAG	CCC	TGC	TCA	AGA	1522
A	G	D	G	A	G	A	L	E	T	E	L	E	464
GCA	GGT	GAT	GGG	GCT	GGT	GCC	CTG	GAG	ACA	GAG	CTG	GAA	1561
G	P	S	Q	P	A	L	E	K	D	A	E	R	477
GGA	CCC	AGC	CAG	CCT	GCT	CTG	GAG	AAG	GAT	GCA	GAA	AGG	1600
P	R	I	R	K	E	N	Q	D	G	P	A	P	490
CCT	CGG	ATA	CGG	AAG	GAG	AAC	CAA	GAC	GGG	CCA	GCC	CCG	1639
Q	E	E	G	K	G	G	Q	S	R	D	S	D	503
CAG	GAG	GAG	GGC	AAA	GGA	GGC	CAG	AGC	AGA	GAC	TCA	GAC	1678
Q	A	P	E	D	R	W	Y	E	A	E	K	V	516
CAG	GCT	CCT	GAG	GAC	AGA	TGG	TAT	GAG	GCA	GAG	AAA	GTC	1717
W	L	A	Q	K	D	G	F	T	L	A	T	V	529
TGG	CTG	GCT	CAG	AAG	GAT	GGA	TTT	ACT	CTT	GCT	ACG	GTG	1756
L	K	P	D	E	G	T	A	D	L	P	A	G	542
CTA	AAG	CCA	GAT	GAG	GGA	ACA	GCA	GAC	CTG	CCA	GCA	GGA	1795
R	V	R	L	C	I	D	A	D	K	T	I	T	555
AGG	GTG	AGA	CTT	TGC	ATT	GAT	GCT	GAC	AAA	ACC	ATC	ACT	1834
E	V	D	E	E	H	V	H	R	A	N	P	P	568
GAG	GTG	GAT	GAG	GAG	CAT	GTC	CAT	CGG	GCC	AAC	CCT	CCT	1873
E	L	D	Q	V	E	D	L	A	S	L	I	S	581
GAG	CTG	GAC	CAG	GTC	GAG	GAC	CTG	GCC	TCT	CTC	ATC	AGT	1912
V	N	E	S	S	V	L	N	T	L	L	Q	R	594
GTC	AAC	GAA	TCC	AGT	GTC	CTG	AAC	ACG	CTT	CTG	CAG	CGC	1951
Y	K	A	Q	L	L	H	T	C	T	G	P	D	607
TAC	AAA	GCT	CAG	CTG	CTG	CAC	ACC	TGC	ACA	GGG	CCT	GAT	1990
L	I	V	L	Q	P	R	G	P	S	V	P	S	620
CTG	ATT	GTC	CTC	CAG	CCC	CGG	GGG	CCC	TCG	GTG	CCT	TCT	2029

FIG. 2C

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A	G	K	V	P	K	G	R	R	D	G	L	P	633
GCA	GGG	AAG	GTG	CCC	AAG	GGC	CGC	CGG	GAT	GGC	CTG	CCT	2068
A	H	I	G	S	M	A	Q	R	A	Y	W	A	646
GCC	CAC	ATT	GGC	TCC	ATG	GCA	CAG	CGG	GCA	TAC	TGG	GCG	2107
L	L	N	Q	R	R	D	Q	S	I	V	A	L	659
CTG	CTG	AAC	CAG	CGG	AGA	GAC	CAG	AGC	ATT	GTG	GCC	CTG	2146
G	R	S	G	A	G	K	T	T	C	C	E	Q	672
GGC	CGG	AGT	GGC	GCT	GGG	AAG	ACC	ACC	TGC	TGT	GAG	CAG	2185
V	L	E	H	L	V	G	M	A	G	S	V	D	685
GTC	CTG	GAA	CAC	CTG	GTG	GGG	ATG	GCA	GGC	AGT	GTG	GAT	2224
G	R	V	S	V	E	K	I	R	A	T	F	T	698
GGC	AGG	GTC	TCA	GTG	GAG	AAG	ATC	CGA	GCC	ACC	TTC	ACT	2263
V	L	R	A	F	G	S	V	S	M	A	H	S	711
GTC	CTC	CGG	GCC	TTC	GGC	TCT	GTG	TCC	ATG	GCC	CAC	AGC	2302
R	S	A	T	R	F	S	M	V	M	S	L	D	724
CGC	AGT	GCC	ACC	CGG	TTC	TCC	ATG	GTG	ATG	TCG	CTG	GAC	2341
F	N	A	T	G	R	I	T	A	A	Q	L	Q	737
TTC	AAC	GCT	ACA	GGC	CGC	ATC	ACA	GCT	GCT	CAG	CTC	CAG	2380
T	M	L	L	E	K	S	R	V	A	R	Q	P	750
ACA	ATG	CTT	TTG	GAG	AAG	AGC	CGC	GTG	GCA	CGG	CAG	CCG	2419
E	G	E	S	N	F	L	V	F	S	Q	M	L	763
GAA	GGG	GAA	AGT	AAC	TTC	CTG	GTT	TTC	TCC	CAG	ATG	CTG	2458
A	G	L	D	L	D	L	R	T	E	L	N	L	776
GCT	GGA	TTG	GAC	TTG	GAT	CTC	AGG	ACG	GAG	CTG	AAC	CTG	2497
H	Q	M	A	D	S	S	S	F	G	M	G	V	789
CAC	CAG	ATG	GCA	GAT	AGC	AGC	TCC	TTT	GGC	ATG	GGC	GTG	2536
W	S	K	P	E	D	K	Q	K	A	A	A	A	802
TGG	TCC	AAG	CCT	GAA	GAT	AAA	CAG	AAG	GCG	GCA	GCT	GCC	2575
F	A	Q	L	Q	G	A	M	E	M	L	G	I	815
TTT	GCC	CAG	CTC	CAG	GGT	GCC	ATG	GAG	ATG	CTG	GGC	ATC	2614
S	E	S	E	Q	R	A	V	W	R	V	L	A	828
TCA	GAG	AGC	GAG	CAG	CGG	GCT	GTT	TGG	CGG	GTC	CTG	GCA	2653
A	I	Y	H	L	G	A	A	G	A	C	K	V	841
GCC	ATC	TAC	CAC	CTG	GGC	GCG	GCG	GGG	GCC	TGC	AAA	GTG	2692
G	R	K	Q	F	M	R	F	E	W	A	N	Y	854

FIG. 2D

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GGT	CGG	AAG	CAG	TTC	ATG	AGG	TTT	GAG	TGG	GCA	AAC	TAC	2731
A	A	E	A	L	G	C	E	Y	E	E	L	N	867
GCA	GCT	GAG	GCC	CTG	GGC	TGC	GAG	TAT	GAG	GAG	CTG	AAC	2770
T	A	T	F	K	H	H	L	R	Q	I	I	Q	880
ACG	GCC	ACC	TTC	AAG	CAC	CAC	CTT	CGA	CAG	ATC	ATC	CAG	2809
Q	M	T	F	G	P	S	R	W	G	L	E	D	893
CAA	ATG	ACG	TTT	GGG	CCA	AGC	CGA	TGG	GGC	CTC	GAG	GAT	2848
E	E	T	S	S	G	L	K	M	T	G	V	D	906
GAG	GAA	ACC	AGC	TCA	GGG	CTC	AAG	ATG	ACA	GGA	GTG	GAC	2887
C	V	E	G	M	A	S	G	L	Y	Q	E	L	919
TGT	GTG	GAG	GGG	ATG	GCC	TCG	GGC	CTG	TAC	CAG	GAA	CTC	2926
F	A	A	V	V	S	L	I	N	R	S	F	S	932
TTT	GCG	GCT	GTG	GTC	TCA	CTC	ATC	AAC	AGA	TCC	TTT	TCC	2965
S	H	H	L	S	M	A	S	I	M	V	V	D	945
TCC	CAC	CAT	CTC	TCC	ATG	GCC	TCC	ATC	ATG	GTG	GTG	GAC	3004
S	P	G	F	Q	N	P	R	H	Q	G	K	D	958
TCT	CCA	GGC	TTC	CAG	AAC	CCC	CGG	CAC	CAG	GGC	AAG	GAC	3043
R	A	A	T	F	E	E	L	C	H	N	Y	A	971
CGG	GCG	GCC	ACC	TTT	GAG	GAG	CTG	TGC	CAC	AAC	TAC	GCC	3082
H	E	R	L	Q	L	L	F	Y	Q	R	T	F	984
CAT	GAG	CGC	CTG	CAG	CTG	CTG	TTC	TAC	CAG	CGG	ACC	TTT	3121
V	S	T	L	Q	R	Y	Q	E	E	G	V	P	997
GTC	TCC	ACG	CTA	CAG	CGA	TAT	CAA	GAG	GAA	GGT	GTT	CCT	3160
V	Q	F	D	L	P	D	P	S	P	G	T	T	1010
GTG	CAG	TTT	GAC	CTC	CCG	GAC	CCC	TCC	CCA	GGG	ACC	ACC	3199
V	A	V	V	D	Q	N	P	S	Q	Q	V	R	1023
GTG	GCT	GTT	GTG	GAT	CAA	AAT	CCC	TCT	CAG	CAG	GTC	CGC	3238
L	P	A	G	G	G	A	Q	D	A	R	G	L	1036
TTA	CCA	GCT	GGA	GGA	GGT	GCC	CAG	GAT	GCC	AGA	GGC	CTT	3277
F	W	V	L	D	E	E	V	H	V	E	G	S	1049
TTC	TGG	GTC	TTA	GAT	GAG	GAA	GTC	CAT	GTA	GAG	GGC	TCC	3316
S	D	S	V	V	L	E	R	L	C	A	T	F	1062
AGT	GAC	AGT	GTG	GTG	CTC	GAG	CGT	CTG	TGT	GCT	ACT	TTC	3355
E	K	K	G	A	G	T	E	G	S	S	A	L	1075
GAG	AAG	AAA	GGA	GCT	GGG	ACT	GAA	GGG	TCC	TCT	GCC	CTG	3394

FIG. 2E

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R	T	C	E	Q	P	L	Q	C	E	I	F	H	1088
CGG	ACC	TGT	GAG	CAG	CCC	CTC	CAG	TGT	GAG	ATT	TTC	CAC	3433
Q	L	G	W	D	P	V	R	Y	D	L	T	G	1101
CAG	TTG	GGA	TGG	GAC	CCT	GTG	CGG	TAC	GAC	CTC	ACG	GGC	3472
W	L	H	R	A	K	P	N	L	S	A	L	D	1114
TGG	CTC	CAC	AGA	GCC	AAG	CCC	AAC	CTC	TCG	GCC	CTG	GAT	3511
A	P	Q	V	L	Q	Q	S	K	R	E	E	L	1127
GCA	CCC	CAG	GTC	CTG	CAA	CAG	TCA	AAA	AGA	GAG	GAG	CTG	3550
R	S	L	F	Q	A	R	A	K	L	P	P	V	1140
CGG	AGT	CTA	TTC	CAG	GCC	CGG	GCC	AAG	CTG	CCT	CCT	GTG	3589
C	R	A	V	A	G	L	E	G	T	S	Q	Q	1153
TGC	CGG	GCT	GTG	GCA	GGC	CTG	GAG	GGC	ACC	TCC	CAG	CAG	3628
A	L	Q	R	S	R	M	V	R	R	T	F	A	1166
GCC	CTG	CAG	AGG	AGC	CGC	ATG	GTG	AGG	AGG	ACC	TTT	GCC	3667
S	S	L	A	A	V	R	R	K	A	P	C	S	1179
AGC	AGC	CTT	GCC	GCG	GTG	AGG	AGG	AAA	GCC	CCG	TGC	TCC	3706
Q	I	K	L	Q	M	D	A	L	T	S	M	I	1192
CAG	ATC	AAG	CTG	CAG	ATG	GAT	GCG	CTG	ACC	AGC	ATG	ATC	3745
K	R	S	R	L	H	F	I	H	C	L	V	P	1205
AAA	AGG	TCC	CGG	CTG	CAC	TTT	ATC	CAC	TGC	CTG	GTA	CCA	3784
N	P	V	V	E	S	R	S	G	Q	E	S	P	1218
AAC	CCT	GTG	GTG	GAA	AGC	AGG	AGT	GGG	CAG	GAA	TCT	CCA	3823
P	P	P	Q	P	G	R	D	K	P	G	A	G	1231
CCA	CCA	CCG	CAG	CCT	GGT	AGA	GAC	AAG	CCT	GGG	GCA	GGT	3862
G	P	L	A	L	D	I	P	A	L	R	V	Q	1244
GGA	CCT	CTG	GCC	CTG	GAT	ATC	CCA	GCA	CTG	AGG	GTC	CAG	3901
L	A	G	F	H	I	L	E	A	L	R	L	H	1257
CTT	GCT	GGG	TTC	CAC	ATC	CTG	GAG	GCT	CTG	CGT	CTG	CAT	3940
R	T	G	Y	A	D	H	M	G	L	T	R	F	1270
AGG	ACA	GGC	TAT	GCT	GAC	CAC	ATG	GGG	CTC	ACT	CGC	TTC	3979
R	R	Q	F	Q	V	L	D	A	P	L	L	K	1283
CGC	CGG	CAA	TTC	CAG	GTG	CTG	GAC	GCT	CCA	CTC	CTG	AAG	4018
K	L	M	S	T	S	E	G	I	D	E	R	K	1296
AAG	CTC	ATG	TCG	ACC	TCC	GAG	GGA	ATA	GAT	GAA	AGG	AAG	4057

FIG. 2F

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A	V	E	E	L	L	E	T	L	D	L	E	K	1309
GCC	GTG	GAG	GAG	CTC	CTG	GAG	ACC	CTG	GAT	CTG	GAA	AAG	4096
K	A	V	A	V	G	H	S	Q	V	F	L	K	1322
AAG	GCG	GTG	GCT	GTG	GGG	CAC	AGC	CAA	GTT	TTT	CTC	AAG	4135
A	G	V	I	S	R	L	E	K	Q	R	E	K	1335
GCA	GGT	GTG	ATC	TCC	AGG	CTT	GAG	AAG	CAG	CGA	GAG	AAG	4174
L	V	S	Q	S	I	V	L	F	Q	A	A	C	1348
CTG	GTA	TCT	CAG	AGC	ATC	GTT	CTC	TTC	CAG	GCG	GCT	TGC	4213
K	G	F	L	S	R	Q	E	F	K	K	L	K	1361
AAG	GGC	TTT	CTG	TCT	CGC	CAG	GAA	TTC	AAG	AAG	CTG	AAG	4252
I	R	R	L	A	A	Q	C	I	Q	K	N	V	1374
ATT	CGC	CGA	CTG	GCT	GCA	CAG	TGC	ATC	CAG	AAG	AAT	GTG	4291
A	V	F	L	A	V	K	D	W	P	W	W	Q	1387
GCT	GTG	TTC	CTC	GCA	GTC	AAG	GAC	TGG	CCA	TGG	TGG	CAG	4330
L	L	G	S	L	Q	P	L	L	S	A	T	I	1400
CTG	CTT	GGT	TCC	CTC	CAG	CCT	CTA	CTT	AGT	GCC	ACC	ATT	4369
G	T	E	Q	L	R	A	K	E	E	E	L	T	1413
GGA	ACT	GAG	CAG	CTC	CGA	GCC	AAG	GAG	GAG	GAG	CTT	ACA	4408
T	L	R	R	K	L	E	K	S	E	K	L	R	1426
ACG	CTA	AGA	CGG	AAG	CTA	GAA	AAA	TCA	GAG	AAG	TTG	CGG	4447
N	E	L	R	Q	N	T	D	L	L	E	S	K	1439
AAT	GAA	CTC	CGG	CAG	AAC	ACA	GAT	CTG	CTA	GAA	AGC	AAG	4486
I	A	D	L	T	S	D	L	A	D	E	R	F	1452
ATT	GCT	GAC	TTG	ACC	TCT	GAC	CTT	GCC	GAT	GAG	CGC	TTC	4525
K	G	D	V	A	C	Q	V	L	E	S	E	R	1465
AAA	GGT	GAT	GTG	GCC	TGC	CAG	GTG	CTG	GAG	AGT	GAG	CGG	4564
A	E	R	L	Q	A	F	R	E	V	Q	E	L	1478
GCA	GAG	CGG	CTA	CAG	GCC	TTC	CGG	GAG	GTC	CAG	GAG	CTC	4603
K	S	K	H	E	Q	V	Q	K	K	L	G	D	1491
AAG	AGC	AAG	CAT	GAA	CAA	GTC	CAG	AAA	AAA	CTG	GGA	GAT	4642
V	N	K	Q	L	E	E	A	Q	Q	K	I	Q	1504
GTG	AAT	AAA	CAG	TTG	GAA	GAA	GCC	CAG	CAG	AAA	ATT	CAG	4681
L	N	D	L	E	R	D	P	T	G	G	A	D	1517
TTG	AAT	GAC	TTG	GAA	AGG	GAT	CCC	ACT	GGA	GGA	GCA	GAC	4720
E	W	Q	M	R	F	D	C	A	Q	M	E	N	1530

FIG. 2G

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GAG	TGG	CAG	ATG	CGC	TTC	GAC	TGT	GCT	CAG	ATG	GAG	AAC	4759
E	F	L	R	K	R	L	Q	Q	C	E	E	R	1543
GAG	TTC	CTC	AGA	AAG	CGT	CTG	CAG	CAA	TGC	GAG	GAG	AGG	4798
L	D	S	E	L	T	A	R	K	E	L	E	Q	1556
CTG	GAC	TCG	GAG	CTG	ACA	GCC	AGG	AAA	GAG	CTG	GAG	CAA	4837
K	L	G	E	L	Q	S	A	Y	D	G	A	K	1569
AAG	CTT	GGG	GAG	TTG	CAA	AGT	GCT	TAT	GAC	GGG	GCC	AAG	4876
K	M	A	H	Q	L	K	R	K	C	H	H	L	1582
AAG	ATG	GCT	CAC	CAA	CTG	AAG	AGG	AAG	TGC	CAC	CAT	CTT	4915
T	C	D	L	E	D	T	C	V	L	L	E	N	1595
ACC	TGT	GAC	CTT	GAG	GAT	ACC	TGC	GTC	CTG	CTA	GAG	AAC	4954
Q	Q	S	R	N	H	E	L	E	K	K	Q	K	1608
CAA	CAA	AGT	CGA	AAC	CAT	GAG	CTG	GAG	AAG	AAG	CAG	AAG	4993
K	F	D	L	Q	L	A	Q	A	L	G	E	S	1621
AAG	TTT	GAC	CTG	CAG	CTG	GCC	CAG	GCC	CTA	GGT	GAG	TCA	5032
V	F	E	K	G	L	R	E	K	V	T	Q	E	1634
GTG	TTT	GAG	AAG	GGT	CTC	CGT	GAG	AAA	GTG	ACC	CAG	GAG	5071
N	T	S	V	R	W	E	L	G	Q	L	Q	Q	1647
AAC	ACC	AGT	GTC	CGG	TGG	GAG	CTA	GGC	CAG	CTT	CAG	CAG	5110
Q	L	K	Q	K	E	Q	E	A	S	Q	L	K	1660
CAG	CTG	AAG	CAA	AAG	GAG	CAG	GAA	GCC	TCA	CAG	CTG	AAG	5149
Q	Q	V	E	M	L	Q	D	H	K	R	E	L	1673
CAG	CAG	GTG	GAG	ATG	CTA	CAG	GAC	CAT	AAA	CGG	GAG	CTG	5188
L	G	S	P	S	L	G	E	N	C	V	A	G	1686
CTG	GGG	TCA	CCC	TCT	CTG	GGG	GAA	AAT	TGC	GTT	GCT	GGC	5227
L	K	E	R	L	W	K	L	E	S	S	A	L	1699
TTG	AAG	GAG	AGG	CTC	TGG	AAG	TTG	GAA	TCC	AGC	GCC	CTT	5266
E	Q	Q	K	I	Q	S	Q	Q	E	N	T	I	1712
GAG	CAA	CAG	AAA	ATC	CAG	AGC	CAG	CAG	GAA	AAC	ACC	ATC	5305
K	Q	L	E	Q	L	R	Q	R	F	E	L	E	1725
AAG	CAG	CTG	GAG	CAG	CTC	CGC	CAG	CGG	TTT	GAG	CTG	GAG	5344
I	E	R	M	K	Q	M	H	Q	K	D	R	E	1738
ATC	GAG	CGG	ATG	AAG	CAG	ATG	CAC	CAG	AAG	GAC	CGT	GAG	5383
D	Q	E	E	E	L	E	D	V	R	Q	S	C	1751
GAC	CAG	GAG	GAG	GAA	CTG	GAG	GAT	GTC	CGT	CAG	TCC	TGC	5422

FIG. 2H

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Q	K	R	L	H	Q	L	E	M	Q	L	E	Q	1764
CAG	AAG	CGG	CTT	CAT	CAG	CTG	GAA	ATG	CAG	CTG	GAG	CAA	5461
E	Y	E	E	K	Q	M	V	L	H	E	K	Q	1777
GAG	TAT	GAA	GAG	AAG	CAG	ATG	GTC	CTC	CAT	GAG	AAG	CAA	5500
D	L	E	G	L	I	G	T	L	C	D	Q	I	1790
GAT	TTG	GAA	GGC	TTG	ATC	GGA	ACC	CTC	TGT	GAC	CAG	ATT	5539
G	H	R	D	F	D	V	E	K	R	L	R	R	1803
GGC	CAT	CGG	GAC	TTT	GAT	GTG	GAG	AAG	CGA	CTT	CGG	AGA	5578
D	L	R	R	T	H	A	L	L	S	D	V	Q	1816
GAC	CTC	AGG	AGG	ACA	CAT	GCA	CTG	TTG	TCA	GAC	GTG	CAG	5617
L	L	L	G	T	M	E	D	G	K	T	S	V	1829
CTC	CTT	CTG	GGC	ACC	ATG	GAG	GAT	GGC	AAG	ACA	TCA	GTC	5656
S	K	E	E	L	E	K	V	H	S	Q	L	E	1842
AGC	AAG	GAG	GAG	CTG	GAG	AAA	GTG	CAC	AGC	CAG	CTG	GAG	5695
Q	S	E	A	K	C	E	E	A	L	K	T	Q	1855
CAG	AGT	GAA	GCC	AAG	TGT	GAG	GAG	GCC	TTG	AAG	ACG	CAG	5734
K	V	L	T	A	D	L	E	S	M	H	S	E	1868
AAG	GTG	CTC	ACA	GCG	GAC	CTG	GAG	AGC	ATG	CAC	AGC	GAG	5773
L	E	N	M	T	R	N	K	S	L	V	D	E	1881
CTG	GAG	AAC	ATG	ACG	CGG	AAC	AAG	AGC	CTG	GTG	GAT	GAG	5812
Q	L	Y	R	L	Q	F	E	K	A	D	L	L	1894
CAG	CTG	TAC	AGG	CTG	CAG	TTT	GAG	AAG	GCG	GAC	CTC	CTG	5851
K	R	I	D	E	D	Q	D	D	L	N	E	L	1907
AAG	CGC	ATC	GAT	GAG	GAC	CAG	GAT	GAC	CTG	AAT	GAG	CTG	5890
M	Q	K	H	K	D	L	I	A	Q	S	A	A	1920
ATG	CAG	AAG	CAC	AAG	GAC	CTC	ATT	GCT	CAG	TCT	GCT	GCT	5929
D	I	G	Q	I	Q	E	L	Q	L	Q	L	E	1933
GAC	ATT	GGG	CAG	ATC	CAA	GAA	CTG	CAG	CTG	CAG	CTG	GAG	5968
E	A	K	K	E	K	H	K	L	Q	E	Q	L	1946
GAA	GCC	AAG	AAG	GAG	AAG	CAC	AAG	CTA	CAA	GAA	CAA	CTG	6007
Q	V	A	Q	M	R	I	E	Y	L	E	Q	S	1959
CAG	GTG	GCT	CAG	ATG	CGC	ATC	GAG	TAC	CTG	GAA	CAG	TCC	6046
T	V	D	R	A	I	V	S	R	Q	E	A	V	1972
ACC	GTG	GAT	CGA	GCC	ATC	GTC	AGC	AGG	CAG	GAG	GCG	GTC	6085

FIG. 2I

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I	C	D	L	E	N	K	T	E	F	Q	K	V	1985
ATC	TGT	GAC	CTA	GAG	AAC	AAG	ACA	GAG	TTC	CAG	AAG	GTG	6124
Q	I	K	R	F	E	V	L	V	I	R	L	R	1998
CAG	ATT	AAG	AGA	TTT	GAG	GTC	CTG	GTG	ATC	CGG	CTT	CGG	6163
D	S	L	I	K	M	G	E	E	L	S	Q	A	2011
GAC	AGC	CTG	ATC	AAG	ATG	GGG	GAG	GAG	CTT	TCA	CAG	GCG	6202
A	T	S	E	S	Q	Q	R	E	S	S	Q	Y	2024
GCC	ACC	TCC	GAG	TCC	CAG	CAG	CGG	GAG	AGC	AGC	CAG	TAC	6241
Y	Q	R	R	L	E	E	L	K	A	D	M	E	2037
TAC	CAG	CGG	CGC	CTG	GAA	GAG	CTG	AAG	GCC	GAC	ATG	GAA	6280
E	L	V	Q	R	E	A	E	A	S	R	R	C	2050
GAG	CTG	GTG	CAG	CGG	GAG	GCA	GAG	GCC	AGC	CGG	CGG	TGC	6319
M	E	L	E	K	Y	V	E	E	L	A	A	V	2063
ATG	GAG	CTG	GAG	AAG	TAC	GTG	GAG	GAA	CTT	GCA	GCA	GTG	6358
R	Q	T	L	Q	T	D	L	E	T	S	I	R	2076
AGG	CAA	ACC	CTC	CAG	ACA	GAC	CTG	GAG	ACA	TCC	ATT	CGG	6397
R	I	A	D	L	Q	A	A	L	E	E	V	A	2089
CGG	ATT	GCC	GAC	CTG	CAG	GCT	GCC	TTG	GAA	GAA	GTG	GCA	6436
S	S	D	S	D	T	E	S	V	Q	T	A	V	2102
TCC	AGT	GAC	AGT	GAT	ACT	GAG	AGT	GTC	CAG	ACG	GCA	GTG	6475
D	C	G	S	S	G	R	K	E	M	D	N	V	2115
GAT	TGT	GGC	AGC	AGC	GGC	CGA	AAA	GAG	ATG	GAT	AAC	GTC	6514
S	I	L	S	S	Q	P	E	G	S	L	Q	S	2128
TCC	ATC	CTC	AGC	TCC	CAG	CCA	GAG	GGC	AGC	CTG	CAG	TCC	6553
W	L	S	C	T	L	S	L	A	T	D	T	M	2141
TGG	TTG	AGC	TGT	ACT	CTG	TCC	CTG	GCC	ACA	GAT	ACT	ATG	6592
R	T	P	S	R	Q	S	A	T	S	S	R	I	2154
AGG	ACT	CCT	TCT	CGA	CAG	TCA	GCC	ACC	AGC	AGC	CGC	ATC	6631
L	S	P	R	I	N	E	E	A	G	D	T	E	2167
CTC	AGC	CCC	AGG	ATA	AAC	GAA	GAG	GCT	GGG	GAC	ACT	GAG	6670
R	T	Q	S	A	L	A	L	S	R	A	R	S	2180
AGG	ACC	CAG	TCG	GCA	TTG	GCA	CTG	AGC	AGA	GCC	CGG	TCC	6709
T	N	V	H	S	K	T	S	G	D	K	P	V	2193
ACC	AAT	GTC	CAC	AGC	AAG	ACC	TCA	GGA	GAC	AAG	CCT	GTT	6748
S	P	H	F	V	R	R	Q	K	Y	C	H	F	2206

FIG. 2J

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TCT	CCC	CAC	TTT	GTC	CGC	CGG	CAA	AAG	TAC	TGT	CAT	TTT	6787
G	D	G	E	V	L	A	V	Q	R	K	S	T	2219
GGG	GAC	GGC	GAA	GTG	CTT	GCC	GTC	CAG	AGA	AAG	TCC	ACA	6826
E	R	L	E	P	A	S	S	P	L	A	S	R	2232
GAG	AGA	TTA	GAA	CCT	GCT	TCC	TCT	CCC	CTG	GCT	TCT	CGG	6865
S	T	N	T	S	P	L	S	R	E	K	L	P	2245
AGT	ACA	AAT	ACA	TCC	CCG	CTG	TCG	AGG	GAA	AAG	CTG	CCC	6904
S	P	S	A	A	L	S	E	F	V	E	G	L	2258
AGT	CCT	TCA	GCG	GCC	CTC	TCG	GAG	TTC	GTG	GAA	GGG	CTC	6943
R	R	K	R	A	Q	R	G	Q	G	S	T	L	2271
CGG	AGG	AAG	AGA	GCC	CAG	AGA	GGC	CAG	GGG	TCC	ACG	CTG	6982
G	L	E	D	W	P	T	L	P	I	Y	Q	T	2284
GGC	CTA	GAG	GAC	TGG	CCC	ACT	CTC	CCC	ATT	TAC	CAG	ACG	7021
T	G	A	S	T	L	R	R	G	R	A	G	S	2297
ACT	GGG	GCC	TCC	ACA	CTA	AGG	AGG	GGC	AGG	GCT	GGC	AGT	7060
D	E	G	N	L	S	L	R	V	G	A	K	S	2310
GAC	GAG	GGA	AAC	CTC	TCG	CTG	AGG	GTT	GGG	GCA	AAG	TCA	7099
P	L	E	I	E	G	A	A	G	G	L	L	R	2323
CCC	CTG	GAA	ATC	GAA	GGG	GCC	GCT	GGT	GGT	CTC	TTG	AGG	7138
S	T	S	L	K	C	I	S	S	D	G	V	G	2336
TCC	ACC	AGC	CTC	AAA	TGC	ATC	TCT	TCA	GAC	GGT	GTT	GGG	7177
G	T	T	L	L	P	E	K	S	K	T	Q	F	2349
GGC	ACA	ACC	CTA	CTC	CCC	GAA	AAG	TCG	AAA	ACC	CAA	TTC	7216
S	S	C	E	S	L	L	E	S	R	P	S	M	2362
AGT	TCC	TGC	GAG	TCC	CTC	TTA	GAA	TCC	AGA	CCG	AGC	ATG	7255
G	R	K	L	S	S	P	T	T	P	R	D	M	2375
GGG	AGA	AAA	CTG	AGC	TCT	CCG	ACC	ACA	CCC	AGG	GAC	ATG	7294
L	L	S	P	T	L	R	P	R	R	R	C	L	2388
CTG	TTG	TCG	CCC	ACA	CTG	CGT	CCT	CGG	AGG	CGG	TGT	CTG	7333
E	S	S	V	D	D	A	G	C	P	D	L	G	2401
GAG	TCC	TCT	GTG	GAC	GAT	GCG	GGC	TGT	CCA	GAC	CTT	GGA	7372
K	E	P	L	V	F	Q	N	R	Q	F	A	H	2414
AAG	GAG	CCG	CTT	GTT	TTC	CAG	AAC	CGC	CAG	TTT	GCC	CAC	7411
L	M	E	E	P	L	G	S	D	P	F	S	W	2427
CTG	ATG	GAG	GAA	CCT	CTA	GGC	AGT	GAC	CCA	TTC	AGC	TGG	7450

FIG. 2K

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K	L	P	S	L	D	Y	E	R	K	T	K	V	2440
AAA	CTC	CCA	AGC	CTC	GAC	TAC	GAA	CGC	AAG	ACC	AAA	GTG	7489
D	F	D	D	F	L	P	A	I	R	K	P	Q	2453
GAC	TTC	GAT	GAC	TTC	CTC	CCA	GCT	ATC	CGG	AAG	CCC	CAG	7528
T	P	T	S	L	A	G	S	A	K	G	G	Q	2466
ACA	CCT	ACC	TCC	TTG	GCT	GGA	TCA	GCC	AAA	GGT	GGG	CAA	7567
D	G	S	Q	R	S	S	I	H	F	E	T	E	2479
GAC	GGT	TCA	CAG	CGT	TCA	AGC	ATC	CAC	TTT	GAA	ACG	GAA	7606
E	A	N	R	S	F	L	S	G	I	K	T	I	2492
GAG	GCT	AAC	CGT	TCC	TTT	CTC	TCG	GGG	ATC	AAG	ACC	ATT	7645
L	K	K	S	P	E	P	K	E	D	P	A	H	2505
TTG	AAG	AAG	AGC	CCG	GAG	CCC	AAG	GAG	GAT	CCC	GCT	CAC	7684
L	S	D	S	S	S	S	S	G	S	I	V	S	2518
CTG	TCT	GAC	TCG	TCC	TCA	TCC	TCC	GGC	TCC	ATC	GTG	TCC	7723
F	K	S	A	D	S	I	K	S	R	P	G	I	2531
TTC	AAA	AGT	GCT	GAC	AGC	ATC	AAA	AGT	CGA	CCA	GGA	ATC	7762
P	R	L	A	G	D	G	G	E	R	T	S	P	2544
CCA	CGA	CTT	GCG	GGT	GAC	GGT	GGC	GAG	CGA	ACG	TCC	CCC	7801
E	R	R	E	P	G	T	G	R	K	D	D	D	2557
GAG	CGG	AGA	GAG	CCA	GGG	ACG	GGG	AGG	AAA	GAC	GAC	GAT	7840
V	A	S	I	M	K	K	Y	L	Q	K	*		2569
GTT	GCG	AGC	ATA	ATG	AAG	AAA	TAC	CTC	CAG	AAG	TAG	gaa	7879
ccagttcagcctccttgaagctgcccttgaagacttcccgactctacaataa												7931	
cttggagacagagagactggccaggcctccccggtggccagagccagccagc												7983	
atggccaccctcaagaggcgagatgagcccacagaggcatatcctgcggggga												8035	
tgctgggctcccagtggtgtggttgccctgaacaaaataaaagtgttgactcctgg												8087	
gcaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa												8117	

FIG. 2L

HGDMLP-1 BAA93660 BAA13206	APEDRWYEAQKQDGFLLATVLKPDGTTADLPAGRVRLCIDADKTITEVDEEHVHR AAEEAWYETEKVWLVRDGFSLASQLKSEE--LSLPEGKARVKLDHGDGAILDVEDDIEK -----	60 58
HGDMLP-1 BAA93660 BAA13206	ANPELDQVEDLASLISVNESSVLNLTLLQRYKAQLLHTCTGPDILVLOPRGP---SVPS ANAPSCDRLEDLASLVYLNNESSVLHTLRQRYGASLLHTYAGPSLLVLSTRGAPAVYSEKV -----	116 118
HGDMLP-1 BAA93660 BAA13206	AGKVPKGRRDGLPAHIGSMAQRAYWALLNORRDOSIVALGRSGAGKTTCCQVLEHLVGM MHMFKGCRREDMAPIYAVAQTAYRAMLSRQDQSI VLLGSSGSGKTTSFQHLVQYLATI MHMFKGCRREDMAPIYAVAQTAYRAMLSRQDQSI ILLGSSGSGKTTSCQHLVQYLATI **:::.* * :.* * * .* .*:****: * * *:****: ::::.* :	176 178 60
HGDMLP-1 BAA93660 BAA13206	AGSVDGRVS-VEKIRATFTVLRAFGSVSMAHSRSATRFSMVMSLDFNATGRITAAQLQTM AGTSGTKVFSVEKWQALSTLLEAFGNSPTIMNGSATRFSQILSLDFDQAGQVASASIQT AGISGNKVFSVEKWQALYTLLEAFGNSPTIINGNATRFSQILSLDFDQAGQVASASIQT ** . : * ** : * * : * * : * * * * : * * * * : * * * * : * * *	235 238 120
HGDMLP-1 BAA93660 BAA13206	LLEKSRVAROPEGESNFLVFSQMLAGLDLRLTELNLHOMADSSFGMGVWSKPEDKQKA LLEKLRVARRPASEATFNVFYLLACGDATLRLTELHLNHLAENNVFGIVPLSKPEEKQKA LLEKLRVARRPASEATFNVFYLLACGDATLRLTELHLNHLAENNVFGIVPLAKPEEKQKA **** * : * * : * * * * : * * * * : * * * * : * * * * : * * * * : * * *	295 298 180
HGDMLP-1 BAA93660 BAA13206	AAFAQLOGAMEMLGISESEQRAVVRVLAAYHLGAAG---ACKVGRKQFMRFEWANYA AQQFSKLQAAAMKVLAISPDEQKACWFI LAAYHLGAAGATKEAAEAGRKQFARHEWAQKA AQQFSKLQAAAMKVLGISPDEQKACWFI LAAYHLGAAGATKEAAEAGRKQFARHEWAQKA * * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	351 358 240
HGDMLP-1 BAA93660 BAA13206	AEALGCEYEELNTATFKHHLRQIIQOMTFGPSRWGLEDEETSSGL--KMTGVDCVEGMAS AYLLGCSLEELSSAIFKHQKGGTLQRTS-FRQGPESGLGEGT--KLSALECLEGMAS AYLLGCSLEELSSAIFKHQKGGTLQRTS-FRQGPESGLGDTGPKLSALECLEGMAA * * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	409 415 299
HGDMLP-1 BAA93660 BAA13206	GLYOELFAAVVSLINRSFSSHLSMASIMVVDSPGFQNPQHOGKDRAATFEELCHNYAHE GLYSELFTHLLISLVNRALKSSQHSLSMMIVDTPGFQNPQEWGGSARGASFEELCHNYAQD GLYSELFTHLLISLVNRALKSSQHSLSMMIVDTPGFQNPQEWGGSARGASFEELCHNYTQD *** * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	469 475 359
HGDMLP-1 BAA93660 BAA13206	RLQLLFYORTFVSTLQRYQEEGVVQFDLPDPSPGTTAVVDQNPQQVRLPAGGGAQDA RLQRLFHERTFLOELERYKEDNIELAFDDLEPVADDSVAAVDQ-ASH--LVRSLAHADDA RLQRLFHERTFVQELERYKEENIELAFDDLEPPTDDSVAAVDQ-ASHQSLVRLARTDEA *** * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	529 532 418
HGDMLP-1 BAA93660 BAA13206	RGLFWVLDEEVHVEGSSDSVVLRLCATFEKKGAGTEGSSALRTCEQPLQCEIFHQLGWD RGLLWLLLEEEALVPGATEDALLDLRFSYYPQEGDKKGQSPLLRSSKPRHFLGHSHGNT RGLLWLLLEEEALVPGASEDTLLERLFSYYPQEGDKKGQSPLLHSSKPHHFLGHSHGNT ***:*.***. * * : * * * : * * * : * * * : * * * : * * * : * * *	589 592 478
HGDMLP-1 BAA93660 BAA13206	PVRYDLTGWLHRAKPNLSALDAPQVLOQSKREELRSLFQARAKLPPVCR-AVAGLEGTSQ WVEYNVAGWLNQYTKQNPATQNPRLQDSQKKIISNLFLGRAGSATVLSGSIAGLEGGSQ WVEYNVAGWLNQYTKQNPATQNPRLQDSQKKIISNLFLGRAGSATVLSGSIAGLEGGSQ * . * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	648 652 538
HGDMLP-1 BAA93660 BAA13206	QALQSRMVRRTFASSLAARRKAPCSQIKLQMDALTSMIKRSRLHFIHCLVPNPV--V LALRRATSMRKTFTTGMAAVKKKSLCIQIKLQVDALIDTIKRSKMHFVHCFLPVAEGWPG LALRRATSMRKTFTTGMAVAVKKKSLCIQIKLQVDALIDTIKRSKLHVFHCFLPVAEGWAG * * : * * * : * * * : * * * : * * * : * * * : * * * : * * * : * * *	705 712 598

FIG. 3A

[illegible]

FIG. 3B

QMR:

2

Sequences Aligned

Query: myocilin [Homo sapiens]: Length 504 (1 .. 504)

Sbjct: hGDMLP-1: Length 2568 (1 .. 2568)

Region of Optimal Alignment

Query: 82 RLDLEATKARLSSLESLLHQLTLDQAARPQETQEGLQRELGLRRERDQ-LETQ---TRE 137
 R DL T A LS ++ LL + + + +E E + +L + ++ L+TQ T +
 Sbjct: 1802 RRDLRRTHALLSDVQLLLGTMEDGKTSVSKEELEKVHSQLEQSEAKCEEALKTQKVLTA 1861

Query: 138 LETAYS---NLLRDKSVLEEEKKRLRQENENLARRLESSSQEVARL 180
 LE+ +S N+ R+KS+++E+ RL+ E +L +R++ ++ L
 Sbjct: 1862 LESMHSELENMTRNKSLVDEQLYRLQFEKADLLKRIDEDQDDLNEL 1907

Statistics

Identities = 30/106 (28%), Positives = 58/106 (54%), Gaps = 7/106 (6%)

FIG. 4

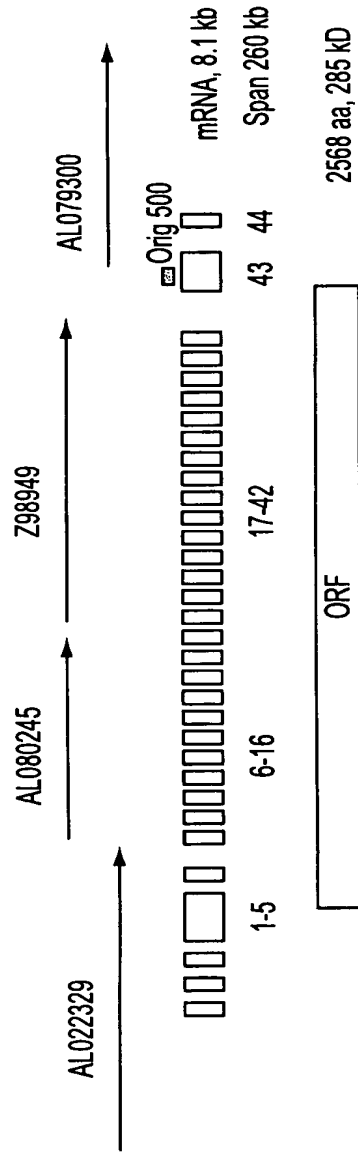


FIG. 5

BEST AVAILABLE COPY

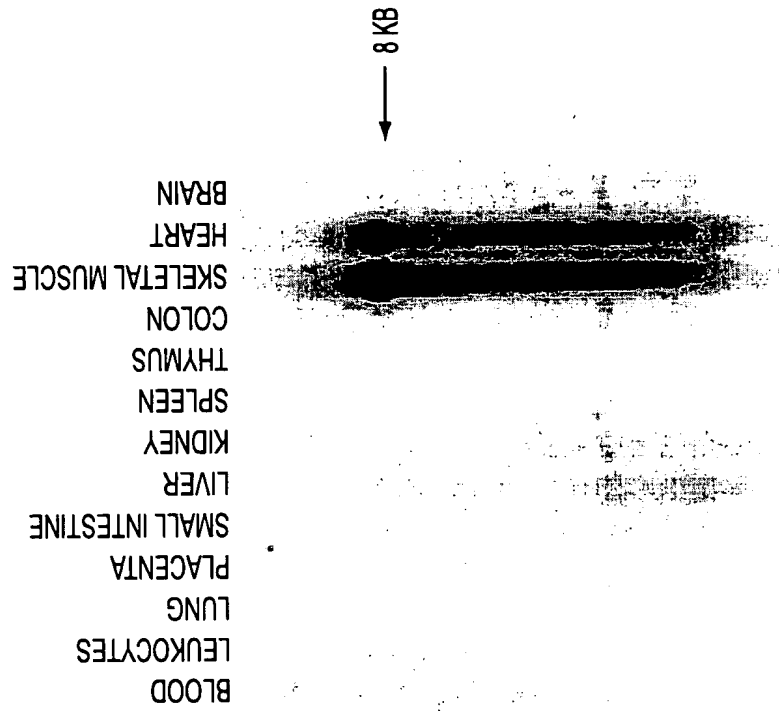


FIG. 6